Chow, Eddie

From: Tim Aulick [taulick@aulickchemical.com]
Sent: Friday, June 07, 2013 1:36 PM
To: Chow, Eddie
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737
Attachments: Calcium Nitrate-Nitric Acid MSDS.doc

Hi Eddie,

I spoke with PECCO, they transported the material to EQ Detroit, Inc. for disposal. I have attached the MSDS generated for the material that went to EQ Detroit, Inc. Would the profile be from EQ Detroit? If so, I can contact them. I apologize for this taking time.

Thanks,

Tim Aulick

Timothy Aulick
President
Aulick Chemical Solutions, Inc.
ph. 859.881.5422
fax. 859.881.8194
email. taulick@aulickchemical.com

-----Original Message-----
From: Chow, Eddie [mailto:Chow.Eddie@epa.gov]
Sent: Tuesday, June 04, 2013 2:43 PM
To: Tim Aulick
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Mr. Aulick,

Have you gotten the profile from PECCO? We are still waiting on a copy to complete the records. Please(or have PECCO) email us a copy as soon as possible.

Thank you

Best Regards,

Eddie Chow, PE
U.S. EPA - Region IV
EPCRA Enforcement Section
61 Forsyth Street, S.W.
Atlanta, GA 30303

Tel: (404)562-8989

-----Original Message-----
From: Tim Aulick [mailto:taulick@aulickchemical.com]
Sent: Wednesday, May 15, 2013 4:36 PM
To: Chow, Eddie
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Eddie,

I apologize for the delay. I am waiting on the profile to be sent to me by PECCO, who is the local contractor handling the material.

Have a great day.

Thanks,

Tim

Timothy Aulick
President
Aulick Chemical Solutions, Inc.
ph. 859.881.5422
fax. 859.881.8194
email. taulick@aulickchemical.com

-----Original Message-----
From: Chow, Eddie [mailto:Chow.Eddie@epa.gov]
Sent: Tuesday, May 14, 2013 1:25 PM
To: Tim Aulick
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Mr. Aulick,

If you have the profile of the recovered material, please send us a copy.

Best Regards,

Eddie Chow, PE
U.S. EPA - Region IV
EPCRA Enforcement Section
61 Forsyth Street, S.W.
Atlanta, GA 30303

Tel: (404)562-8989

Thanks

-----Original Message-----
From: Tim Aulick [mailto:taulick@aulickchemical.com]
Sent: Tuesday, May 07, 2013 1:34 PM

To: Chow, Eddie
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Hey Eddie,

We did not process any nitric acid in 2011 or 2012. Also, calcium hydroxide was not stored at our facility in 2011 or 2012.

I will get the profile for the recovered material and send it to you.

Many Thanks,

Timothy Aulick
President
Aulick Chemical Solutions, Inc.
ph. 859.881.5422
fax. 859.881.8194
email. taulick@aulickchemical.com

-----Original Message-----
From: Chow, Eddie [mailto:Chow.Eddie@epa.gov]
Sent: Tuesday, May 07, 2013 12:11 PM
To: Tim Aulick
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Mr. Aulick,

Thank you for your quick response.

You indicated "None" on Items 3 & 4. Did you process any nitric acid in 2011? If so, what was the quantity? Was calcium hydroxide stored at your facility in 2011 and 2012? If so, what were the maximum quantities held?

In the email you sent to Mr. Lawrence Fincher, you indicated that 2170 gal of the material were recovered and that you have received a profile for the waste. Please send us a copy of the profile or any other sample results to show the concentration of nitric acid in the recovered material.

Best Regards,

Eddie Chow, PE
U.S. EPA - Region IV
EPCRA Enforcement Section
61 Forsyth Street, S.W.
Atlanta, GA 30303

Tel: (404)562-8989

-----Original Message-----
From: Tim Aulick [mailto:taulick@aulickchemical.com]
Sent: Tuesday, May 07, 2013 11:31 AM
To: Chow, Eddie
Subject: RE: Nitrogen Dioxide Release - NRC# 1040737

Eddie,

Here is the response to your questions in regard to NRC#1040737.

1. Attached is the Spec Sheet for the 67% nitric acid 2. Nitric Acid processed in 2012: 0#. We received 1 shipment of 40,000lbs.
on March 11, 2013. 15,730 lbs. were used in the initial batch when the mixing tank released. The remainder of the nitric acid stored on site was sent to another company currently using nitric acid 67%.
3. None
4. None
5. The addition of calcium hydroxide was not complete when the contents were released into the containment pit. The actual weights for each ingredient are as follows:

-Water: 4,480 lbs.
-Nitric Acid 67%: 15,730 lbs.
-Calcium Hydroxide: 3,630 lbs.

I hope this answers your questions. Let me know if I can be of any other assistance.

Have a great day.

Thanks,

Timothy Aulick
President
Aulick Chemical Solutions, Inc.
ph. 859.881.5422
fax. 859.881.8194
email. taulick@aulickchemical.com

-----Original Message-----
From: Chow, Eddie [mailto:Chow.Eddie@epa.gov]
Sent: Thursday, May 02, 2013 9:50 AM
To: taulick@aulickchemical.com
Subject: Nitrogen Dioxide Release - NRC# 1040737

Mr. Aulick,

Thank you for sending us the information pertaining to the subject release incident. In following up with the investigation, please provide us with the information requested below:

- Spec sheet of the 67% nitric acid received
- Total volume(or weight) of the nitric acid processed in 2012
- 2011 Form R or Form A for nitric acid
- 2012 Tier II report

- Before the tank contents released into the containment pit, was the addition of calcium chloride completed? What were the actual volumes(weights) of water/nitric acid/calcium hydroxide added before the incident?

Best Regards,

Eddie Chow, PE
U.S. EPA - Region IV
EPCRA Enforcement Section
61 Forsyth Street, S.W.
Atlanta, GA 30303

Tel: (404)562-8989

-----Original Message-----
From: Timothy Aulick [mailto:taulick@aulickchemical.com]
Sent: Monday, March 25, 2013 9:41 AM
To: Fincher, Lawrence
Subject: RE: Tim Aulick's email address

Hello Lawrence,

I hope you had a great weekend.

I wanted to email you to answer the questions you had. The 2200 gallons that went from the mixing tank to the containment pit was a blend of 67% nitric acid, water, and calcium hydroxide. The ratio is as follows:

Water: 20% by weight
67% Nitric Acid: 65% by weight
Calcium Hydroxide: 15% by weight

1. We recovered 2170 gallons of the 2200 gallons in totes on site. We just received a waste profile and are seeking to send for disposal.

2. During the mixing process, water was first put into the tank, followed by 67% nitric acid Then calcium hydroxide was being added to neutralize and create Calcium Nitrate.

3. The temperature of the solution was 160 degree Fahrenheit when the failed fitting released it to the containment pit.

I hope this answers your questions Lawrence. Feel free to call me anytime.

Have a great day.

Tim Aulick

Timothy Aulick
President
Aulick Chemical Solutions, Inc.
ph. 859.881.5422
fax. 859.881.8194

email. taulick@aulickchemical.com

-----Original Message-----
From: Fincher, Lawrence [mailto:Fincher.Lawrence@epa.gov]
Sent: Thursday, March 21, 2013 11:23 AM
To: Tim Aulick
Subject: RE: Tim Aulick's email address

Good Morning Tim!

Hope by now you have returned home from Indianna.

In our discussion by way of telephone yesterday you provided answers for most of the questions we had involving your Nitric Acid release(RFNA).NRC#1040737. Looking at the MSDS Sheet It states that in a 67Wt% Nitric Acid solution that the solution contains a greater amount than 6Wt% NO2 dissolved in the mixture.

Nitric also decomposes in sunlight by the following equation.

4HNO3 decomposes into the following 2H2O + 4NO2 + O2

Information from the Wikipedia , the free encyclopedia states that Nitric Acid Solutions can contain as much as 13 to 17Wt% nitrogen dioxide. The regulated chemical being NO2

The other questions that we had were as follows:

1. How many gallons of Nitric Acid were recovered from the 2200 gallons?

2. What was the Nitric Acid being diluted with at the time of discover of the leaking tank fixture?

3. Temperature of Nitric Acid solution released to the concrete containment?

As an academic point. I think the News Paper person who did the first article missed the boat The Brown Plume that was released in the spill was due to the dissolved NO2 in the solution rather than the Nitric Acid reacting with the concrete containment.

Hang in there Tim. As per your comment I enjoyed our discussion also.

If you have any questions regarding the release of FMNA give me a call.
404-562-9190

Lawrence U S EPA EPCRA Section

-----Original Message-----
From: Tim Aulick [mailto:taulick@aulickchemical.com]
Sent: Wednesday, March 20, 2013 2:36 PM
To: Fincher, Lawrence
Subject: Tim Aulick's email address

Lawrence.

It was nice talking to you. This is my email address.

Thanks

Tim Aulick

Aulick Chemical Solutions, Inc.
111 Patton Court. Nicholasville, KY. 40356
phone number: 859.881.5422

Material Safety Data Sheet

Calcium Nitrate/Nitric Acid Blend

For Disposal

Revision Date: 3/12/2013

1. Product Identification

Chemical Family:	Inorganic Liquid
Chemical Name:	Proprietary

2. Composition / Ingredient Information

Component	CAS Number	% By Weight
Calcium Nitrate	10124.-37-5	>25 %
Nitric Acid	7697-37-2	>10%

3. Hazard Identification

Emergency Overview: Acid Product (pH: 1.5)

Potential Health Effects:
Eye: Corrosive to eye tissue and can be destroyed.
Skin: Will burn skin.
Inhalation: No additional information.
Ingestion: No additional information.

4. First Aid Measures

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Seek medical contact in case of eye contact.
Minor Skin Contact: Immediately flush skin with water while removing contaminated clothing. Seek medical attention if irritation persists.
Minor Inhalation: Alow the affected individual to rest in well ventilated area. Seek medical attention.
Ingestion: If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

5. Fire and Explosion Hazard

Flashpoint: Unknown
Auto ignition: Unknown

Extinguishing Media: N/A
Protective equipment for fire fighting: N/A

Other Information: N/A

HMIS Rating:
Health: 3 Fire: 0 Reactivity: 1 Special: -

6. Spill Control Procedure

Personal precautions: Unknown

Environmental precautions: Unknown

Spill Recovery: Dispose of product according to local, state, and federal regulations.

7. Handling and Storage

Handling: Corosive Product

Storage: Store in sealed contiiner.

8. Personal Protection

For open systems, wear faceshield, safety suit and gloves.

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Product Appearance: black colored material
Odor: acid odor
pH: 1.5
Boiling Point: Unknown
Vapor Pressure, mmHg at ° F: I Unknown
Viscosity of Liquid, CST at ° F: Unknown
Specific Gravity: 10.2-11.5 lbs. per gallon @ 77 ° F
Freezing/ Melting Point, ° F: Unknown
Evaporation Rate, n- Butyl Acetate = 1: Unknown

10. Stability and Reactivity Information:

Stability: Stable
Conditions to avoid instability: Basic Environment
Materials and Conditions to avoid incompatibility: Petroleum Products and Strong Bases
Hazardous Decomposition: Unknown
Hazardous Polymerization: Unknown
Conditions to avoid Hazardous Polymerization: Unknown

11. Transportation

U.S. DOT Classification: Corrosive

HMIS Rating:
Health: 3 Fire: 0 Reactivity: 1 Special: -

NOTE:
This Technical and Safety Information is given in good faith to our customers but it should not be construed as a warranty or representation for which Aulick Chemical Solutions, Inc. can assume legal responsibility. This information should not be construed as a recommendation to use any product in conflict with existing patents or licenses. Users should verify and test the suitability of the products for their own specific applications. Furthermore, no responsibility is assumed or implied for misuse and resulting damages.

Agrium

SPECIFICATIONS

INDUSTRIAL GRADE NITRIC ACID 67.2-67.9%

ANALYSIS:	TYPICAL	TEST METHOD
HNO_3 CONTENT	67.2% - 67.9%	TITRATION
SO_4	10 ppm MAX	TURBIDIMETRIC
Fe	15 ppm MAX	TURBIDIMETRIC
Cl	3 ppm MAX	AAS
NO_2	25 ppm MAX	TITRATION
Color	Water White to APHA 50	

TYPICAL PHYSICAL DATA:

	67.2%	68.2%
SP. GR. AT 15.5 °C. (60 °F)	1.408	1.4120
LBS./GALLON	11.73	11.76